

REPORT

FROM

THE SECRETARY OF THE NAVY,

IN COMPLIANCE

With a resolution of the Senate of the 15th of April last, in relation to a system of defence by means of armed steamers.

JUNE 27, 1838.

Referred to the Committee on Naval Affairs; and ordered to be printed.

NAVY DEPARTMENT,
June 26, 1838.

SIR: In answer to a resolution of the Senate of the 10th of April last, that the Secretary of the Navy be instructed to communicate to the Senate whether, in his judgment, a system of defence by armed steamers might not be organized, which would be more effective and economical than any mode hitherto employed to resist invasion; and that he be further instructed to lay before the Senate an estimate of the expense of organizing an efficient system of defence by armed steamers, I have the honor to state that measures have been adopted to obtain the information necessary to a satisfactory answer to the important subject referred. Several months, however, must elapse before this information can be obtained. In the mean time, I beg leave to submit such an answer as my scanty means of information will enable me to give.

In my annual report of the 29th of November, 1834, I stated that "I would respectfully repeat a recommendation of my predecessor, that authority be given to construct two or three steam batteries, as the means of testing the application of steam to the purposes of national defence.

"It can hardly be doubted that the power of steam is soon to produce as great a revolution in the defence of rivers, bays, coasts, and harbors, as it has already done in the commerce, intercourse, and business of all classes of men in Europe as well as America.

"This subject has already attracted the attention of the maritime powers of Europe; and our honor, as well as safety, requires that no nation, whose fleets may come in conflict with ours, should be in advance of us in the science and application of this power, upon which the success of our future wars may depend.

"Should the power of steam, as a means of defence, produce all the effects that may be justly anticipated, it will diminish, in some instances, the necessity of permanent fortifications on our coasts, by substituting those

which may be moved from place to place as they may be wanted, and, in our own waters, become the formidable engines of attack as well as defence.

"The heavy and cumbersome steam vessels and batteries, with their necessary apparatus and supplies, which may be brought into action, with the most powerful effect, by a nation near its own shores and harbors, cannot be transported over distant seas and oceans for the purpose of attacking its enemies. Should, therefore, the application of steam become a system of maritime war, it is a consolation to reflect that it will greatly diminish the frequency as well as horrors of such war, inasmuch as it will hold out much greater advantages to the defending than to the attacking party, and take from the aggressor, in a great degree, his hope of success, and, of course, his motive for action."

The opinion then expressed is strengthened by further reflection; and the fact that the maritime powers of Europe are going extensively into a system of defence as well as attack, by means of steam batteries, leaves us no choice but to adopt a similar system.

In case of war with those powers, our coasts and harbors will be invested by their lighter and less powerful steam vessels, notwithstanding the difficulty of bringing the necessary fuel across the ocean, or of procuring it on the American continent, and transporting it to points where it may be wanted.

The policy of preparing for this system of defence, as fast as our means will conveniently permit, cannot be doubted.

The steam battery Fulton, now at the navy yard in Washington, although requiring some improvements, which can easily be made, is well calculated for harbor defence, and affords satisfactory evidence of the efficiency of steam batteries as a part of our national defence.

The system of defence by armed steamers must be considered as in combination with defence by ships of war, and defence by means of permanent fortifications. It is, therefore, important to consider in what proportion, with a view to efficiency and economy, the entire system of our coast and harbor defence should consist of steam vessels and batteries.

With a view to obtain information on this subject, I called on the Commissioners of the Navy Board to report to me "how large a portion of the means of defence of our harbors and coast from invasion could, with advantage to the country, consist of armed steamers, with an estimate of the expenses of preparing such steamers with their proper armament, equipments, and crews, and the expense of supporting the same annually after they shall be prepared." To which the commissioners made a report on the 29th of last month, which report is hereunto annexed.

The commissioners have not the information necessary to a satisfactory answer to the question proposed to them; but they suggest the propriety of committing the subject to the consideration of a board of officers of the army and navy; a measure which I respectfully recommend may be adopted. In the mean time, the nine steamers, the frames of which the commissioners have already made arrangements to procure, could be completed.

It is proposed, if the appropriations will warrant it, to commence three steamers this season of materials on hand, purchased for other purposes, but which might advantageously be transferred to this.

For all the information as to the expense of organizing an efficient system of defence by armed steamers that can be given at this time, I beg leave to refer to the report of the Navy Commissioners.

Although we cannot at this time ascertain, with any near approach to accuracy, how far we may safely substitute steam batteries for permanent fortifications, heretofore deemed indispensably necessary for the defence of our coasts and harbors, yet there cannot be a doubt that this can be done to a great extent, affording a system of defence more effective and economical than any mode hitherto employed to resist invasion; more especially if railroads, already a most important element in our national system of defence, shall be constructed, with a view to the transportation of men and munitions of war to points most exposed and most requiring defence.

I have the honor to be,

Sir, very respectfully,

Your obedient servant,

MAHLON DICKERSON.

The Hon. R. M. JOHNSON,

President of the U. S. Senate.

NAVY COMMISSIONERS' OFFICE,

May 29, 1838.

SIR: The Board of Navy Commissioners duly received your letter of the 18th ultimo, requiring them to report to you, "how large a portion of the means of defence of our harbors and coast from invasion, could, with advantage to the country, consist of armed steamers, with an estimate of the expense of preparing such steamers, with their proper armament, equipments, and crews, and the expense of supporting the same annually after they shall be prepared."

After as careful consideration of this subject as could be given consistently with due attention to their other duties, the board find themselves unable to furnish the information required by your letter, to the extent and in the detail which is directed.

The *material* defences of the coast of the United States, comprise permanent fortifications and a naval force to be moved by wind or steam. These elements of defence are mutually dependant, to a certain extent, and may be used separately or in combination.

In the opinion of the board, no proper estimate can be made of the portion of defence which should be assigned to either of these kinds of force, or to particular modifications of either, without a previous examination of the nature and extent of danger to which the coast generally, and particular portions of it especially, may be exposed; and of the fiscal and other resources of the country to supply, and advantageously use, the full extent of naval force and fortifications which a complete defence would require.

A similar examination would also be necessary to determine the species or combination of force that would be most advantageous for each of those positions which, from their peculiar importance, might be deemed to require special protection.

It is evident that the collection, arrangement, and comparison of all this variety and extent of information, would require the undivided attention of any persons to whom it might be assigned, for a very considerable length of time, which it is hoped will be considered a sufficient apology for the general character of the opinions which alone the board feel justified in expressing, at this time, upon the subject of your inquiry.

The great importance of a naval force for national defence, even when composed only of sailing vessels, has been so thoroughly demonstrated by the experience of other nations and by our own, as no longer to admit of controversy. The application of steam to this species of force, which gives to it the power of motion, almost at the will of those by whom it is directed, removes in a great degree one of the principal defects of the ordinary force, and greatly increases its usefulness.

Armed vessels moved by steam are, in their present state of improvement, peculiarly applicable for the defences of coasts, sounds, and harbors, in connexion with fixed fortifications; but their general character is essentially naval, and they require to be managed by those accustomed to the sea.

In the views which have been presented at different times upon the subject of coast defence, the use of armed steamers for that purpose has been alluded to in general terms, but no expectation appears to have been entertained, that it would also constitute one of the forms of force by which we might be assailed.

The rapid improvements which have been made in steam vessels, and the success of experiments to ascertain the practicability of navigating the ocean by them, has been so great, that it would, in the opinion of the board, be inexpedient to act longer upon the supposition that we should not be exposed to danger from their attacks in a future war. Unless we are prepared to resist this species of force with vessels of similar character, an enemy would be able to operate with peculiar advantage against other defences, which had not been prepared with a reference to such form of attack.

Some of the proposed fortifications might perhaps be rendered of little or no use, by the ability of steamers to reach the objects proposed to be covered, without being compelled to pass under the fire of the works intended for their protection; and an ordinary naval force might sometimes be avoided, or even attacked at great disadvantage, from the want of an equal power to regulate their movements.

The advantages of armed steamers, as a part of the general and naval defences of the coast, are not confined to their own power of inflicting direct injury upon an enemy, by the use of their armament, but extend to their peculiar adaptation for the rapid and convenient transportation of men and stores, and their power of placing armed sailing vessels in the most advantageous positions, when they could not possibly reach them, in proper time, by any other means.

The board are also of opinion, that they will eventually become no less important for general naval purposes, than for the more limited service, in the interior waters, or upon the immediate coasts of the United States; and, entertaining these opinions, the board have, with the sanction of the Secretary of the Navy, already made arrangements for procuring the frames for nine steamers, under the act for the gradual improvement of the navy.

Although steam machinery, and its application to navigation, and the form and arrangements of the vessels which use it, will probably receive such further improvement as to diminish the relative value of the vessels which are already or may be soon constructed, and therefore render it inexpedient to provide now for all that may be required for a state of war, yet the importance of being, in some degree, prepared for any sudden demand for this species of force, and of training a sufficient number of officers for its more general use hereafter, requires, in the opinion of the board,

the construction of this number of armed steam vessels, and the collection of materials for others, to be built hereafter, as early as proper arrangements can be made, and the necessary appropriations of money be granted by Congress.

In the opinion of the board, this number could be advantageously employed as a part of the ordinary naval force, in commission, in a time of peace, and would be ready for general or harbor defence, in case of hostilities.

From the imperfect data at present in the possession of the board, they estimate the cost of steamers of the general dimensions which they would recommend, at about \$325,000, each, when equipped and armed.

The annual expense of each, including decay, and wear and tear upon such service as they would probably be employed, and supposing them to use their steam one-seventh of the time, may be estimated at about \$115,000; but this would vary much, according to the necessity which might exist for the use of steam, as fuel will constitute the largest item of their current expenses.

The board have already expressed the opinion, that no correct decision can be formed upon the extension which ought to be given to any one of the elements of coast defence, without an examination of the whole system.

The greater part of the present system was recommended by a board composed of officers of the army and navy, after a general examination of the coast, and a careful consideration of the dangers to which we were then exposed, and of our means of resistance.

Important changes have taken place, however, since their views were presented, not only in the character of the force by which we may be attacked, but in our means of concentrating a force upon given points of the coast, and in the great increase of our population. The introduction and rapid extension of railroads, the great increase of canal communications, and the multiplication of steam vessels upon all our navigable streams and inland waters, have rendered many points comparatively strong, which were almost beyond the reach of early support, at the close of the last war. The application of steam to armed vessels, has also been gradually introduced by all naval nations, and already furnishes an important element, both for attack and defence, with every probability of being rendered more general in its application.

Although these changes will not probably affect the general principles of coast defence as it is now established, nor diminish the necessity for many of the fortifications which it contemplates, for the protection of important cities and other positions, yet they seem sufficient to justify, if not require, a re-examination of the subject, for the purpose of determining whether some modification may not be advantageously adopted. Should such a course be deemed expedient, and the duty be assigned to a board composed, as formerly, of officers of the army and navy, the consideration of the general system would, of necessity, require their attention to the use of armed steamers; and such a board would be very competent to determine their number, and the distribution which would furnish the best combination with the other naval force and the fixed fortifications for the general defence of the coast.

The Board of Navy Commissioners present the suggestion for this re-examination with the more confidence, under a belief that no injury will result from the delay it may produce in carrying the defences to their maxi-

num extent, because the completion of the fortifications whose importance will be universally acknowledged, and the construction of the steamers herein proposed as a peace establishment, would probably occupy all the time which the re-examination would require.

I have the honor to be,

With great respect, sir,

Your obedient servant,

I. CHAUNCEY.

Hon. MAHLON DICKERSON,

Secretary of the Navy.

The annual expense of each including decay and wear and tear upon such services as they would probably be employed, and supposing them to use their steam consumption of the time may be estimated at about \$115,000; but this would vary much according to the necessity which might exist for the use of steam, as fuel will constitute the largest item of their current expenses.

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Although these changes will not probably affect the general principles of coast defence as it is now established, nor diminish the necessity for many of the fortifications which it contemplates, for the preservation of important cities and other positions, yet they seem sufficient to justify, if not require, a re-examination of the subject for the purpose of determining whether some modification may not be advantageously adopted. Should such a course be deemed expedient, and the duty be assigned to a board composed, as formerly of officers of the army and navy, the consideration of the general system would of necessity require their attention to the use of armed steamers; and such a board would be very competent to determine their number and the disposition which would furnish the best combination with the other naval force and the fixed fortifications for the general defence of the coast.

The Board of Navy Commissioners present the suggestion for this re-examination with the more confidence, under a belief that no injury will result from the delay it may produce in carrying the defence to their maxi-

DOCUMENTS

1900-1901

THE COMMISSIONERS AND MANAGERS OF THE CANAL IN THE
FISCAL YEAR ENDING 1901

June 30, 1901

Report of the Commissioners and Managers of the Canal for the year ending June 30, 1901

The following is a statement of the receipts and disbursements of the Canal for the year ending June 30, 1901, as reported by the Managers of the Canal.

	No.	Receipts	No.	Disbursements	No.	Balance
From Canal	1	\$1,000.00	1	\$1,000.00	1	\$0.00
From Canal	2	1,000.00	2	1,000.00	2	0.00
From Canal	3	1,000.00	3	1,000.00	3	0.00
From Canal	4	1,000.00	4	1,000.00	4	0.00
From Canal	5	1,000.00	5	1,000.00	5	0.00
From Canal	6	1,000.00	6	1,000.00	6	0.00
From Canal	7	1,000.00	7	1,000.00	7	0.00
From Canal	8	1,000.00	8	1,000.00	8	0.00
From Canal	9	1,000.00	9	1,000.00	9	0.00
From Canal	10	1,000.00	10	1,000.00	10	0.00
From Canal	11	1,000.00	11	1,000.00	11	0.00
From Canal	12	1,000.00	12	1,000.00	12	0.00
From Canal	13	1,000.00	13	1,000.00	13	0.00
From Canal	14	1,000.00	14	1,000.00	14	0.00
From Canal	15	1,000.00	15	1,000.00	15	0.00
From Canal	16	1,000.00	16	1,000.00	16	0.00
From Canal	17	1,000.00	17	1,000.00	17	0.00
From Canal	18	1,000.00	18	1,000.00	18	0.00
From Canal	19	1,000.00	19	1,000.00	19	0.00
From Canal	20	1,000.00	20	1,000.00	20	0.00
From Canal	21	1,000.00	21	1,000.00	21	0.00
From Canal	22	1,000.00	22	1,000.00	22	0.00
From Canal	23	1,000.00	23	1,000.00	23	0.00
From Canal	24	1,000.00	24	1,000.00	24	0.00
From Canal	25	1,000.00	25	1,000.00	25	0.00
From Canal	26	1,000.00	26	1,000.00	26	0.00
From Canal	27	1,000.00	27	1,000.00	27	0.00
From Canal	28	1,000.00	28	1,000.00	28	0.00
From Canal	29	1,000.00	29	1,000.00	29	0.00
From Canal	30	1,000.00	30	1,000.00	30	0.00
From Canal	31	1,000.00	31	1,000.00	31	0.00
From Canal	32	1,000.00	32	1,000.00	32	0.00
From Canal	33	1,000.00	33	1,000.00	33	0.00
From Canal	34	1,000.00	34	1,000.00	34	0.00
From Canal	35	1,000.00	35	1,000.00	35	0.00
From Canal	36	1,000.00	36	1,000.00	36	0.00
From Canal	37	1,000.00	37	1,000.00	37	0.00
From Canal	38	1,000.00	38	1,000.00	38	0.00
From Canal	39	1,000.00	39	1,000.00	39	0.00
From Canal	40	1,000.00	40	1,000.00	40	0.00
From Canal	41	1,000.00	41	1,000.00	41	0.00
From Canal	42	1,000.00	42	1,000.00	42	0.00
From Canal	43	1,000.00	43	1,000.00	43	0.00
From Canal	44	1,000.00	44	1,000.00	44	0.00
From Canal	45	1,000.00	45	1,000.00	45	0.00
From Canal	46	1,000.00	46	1,000.00	46	0.00
From Canal	47	1,000.00	47	1,000.00	47	0.00
From Canal	48	1,000.00	48	1,000.00	48	0.00
From Canal	49	1,000.00	49	1,000.00	49	0.00
From Canal	50	1,000.00	50	1,000.00	50	0.00
From Canal	51	1,000.00	51	1,000.00	51	0.00
From Canal	52	1,000.00	52	1,000.00	52	0.00
From Canal	53	1,000.00	53	1,000.00	53	0.00
From Canal	54	1,000.00	54	1,000.00	54	0.00
From Canal	55	1,000.00	55	1,000.00	55	0.00
From Canal	56	1,000.00	56	1,000.00	56	0.00
From Canal	57	1,000.00	57	1,000.00	57	0.00
From Canal	58	1,000.00	58	1,000.00	58	0.00
From Canal	59	1,000.00	59	1,000.00	59	0.00
From Canal	60	1,000.00	60	1,000.00	60	0.00
From Canal	61	1,000.00	61	1,000.00	61	0.00
From Canal	62	1,000.00	62	1,000.00	62	0.00
From Canal	63	1,000.00	63	1,000.00	63	0.00
From Canal	64	1,000.00	64	1,000.00	64	0.00
From Canal	65	1,000.00	65	1,000.00	65	0.00
From Canal	66	1,000.00	66	1,000.00	66	0.00
From Canal	67	1,000.00	67	1,000.00	67	0.00
From Canal	68	1,000.00	68	1,000.00	68	0.00
From Canal	69	1,000.00	69	1,000.00	69	0.00
From Canal	70	1,000.00	70	1,000.00	70	0.00
From Canal	71	1,000.00	71	1,000.00	71	0.00
From Canal	72	1,000.00	72	1,000.00	72	0.00
From Canal	73	1,000.00	73	1,000.00	73	0.00
From Canal	74	1,000.00	74	1,000.00	74	0.00
From Canal	75	1,000.00	75	1,000.00	75	0.00
From Canal	76	1,000.00	76	1,000.00	76	0.00
From Canal	77	1,000.00	77	1,000.00	77	0.00
From Canal	78	1,000.00	78	1,000.00	78	0.00
From Canal	79	1,000.00	79	1,000.00	79	0.00
From Canal	80	1,000.00	80	1,000.00	80	0.00
From Canal	81	1,000.00	81	1,000.00	81	0.00
From Canal	82	1,000.00	82	1,000.00	82	0.00
From Canal	83	1,000.00	83	1,000.00	83	0.00
From Canal	84	1,000.00	84	1,000.00	84	0.00
From Canal	85	1,000.00	85	1,000.00	85	0.00
From Canal	86	1,000.00	86	1,000.00	86	0.00
From Canal	87	1,000.00	87	1,000.00	87	0.00
From Canal	88	1,000.00	88	1,000.00	88	0.00
From Canal	89	1,000.00	89	1,000.00	89	0.00
From Canal	90	1,000.00	90	1,000.00	90	0.00
From Canal	91	1,000.00	91	1,000.00	91	0.00
From Canal	92	1,000.00	92	1,000.00	92	0.00
From Canal	93	1,000.00	93	1,000.00	93	0.00
From Canal	94	1,000.00	94	1,000.00	94	0.00
From Canal	95	1,000.00	95	1,000.00	95	0.00
From Canal	96	1,000.00	96	1,000.00	96	0.00
From Canal	97	1,000.00	97	1,000.00	97	0.00
From Canal	98	1,000.00	98	1,000.00	98	0.00
From Canal	99	1,000.00	99	1,000.00	99	0.00
From Canal	100	1,000.00	100	1,000.00	100	0.00

